

Camden Glass Works

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The Camden Glass Works was in business for less than one decade. Its primary product appears to have been fruit jars, although the plant made also beer bottles and other containers. The business might have had a bright future if it had not become embroiled in a patent infringement case that heralded its demise.

History

Camden Glass Works, Camden, New Jersey (1875-1884)

Joseph Wharton opened the Camden Metal Works in 1862 between 10th St. and Cooper's Creek. Later called the American Nickel Works, it was the only nickel refinery in the United States at that time. Wharton's production was primarily aimed at coins, specifically the five cent "nickel." In 1875, he purchased the adjoining property to the north (10th & State Streets) and opened the Camden Glass Works (Camden 2010; Yates 1987:170).

The report that accompanied the 1877, Hexamer General Surveys map (Volume 12) stated that the Camden Glass Works was entirely rebuilt in 1876. The factory was just north of the American Nickel Works, and Joseph Wharton owned both properties (Figure 1). The Nickel Works employed 80 workers, only two of whom were boys. However, boys made up half of the 60 workers at the glass plant. The glass factory was made of brick and had a single furnace surrounded by five annealing ovens.

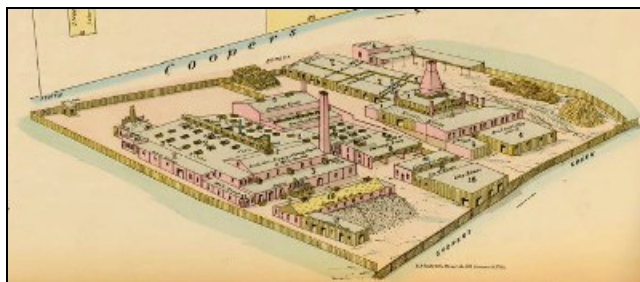


Figure 1 – Hexamer 1877 drawing – (Free Library of Philadelphia Digital Collections)

On September 11, 1880, the *Camden Courier* announced that the "Whitney Brothers, a well-known firm of glass manufacturers of Glassboro, have taken the glass-works of Joseph Wharton on Cooper's Creek and commenced work with sixteen pots." Subsequent evidence

suggests that the words “have taken” indicated a temporary move, not a permanent one. Wharton was back in control two years later – although the Whitneys returned to Camden in 1888 (see the Later Glass Plants section below).

By at least March 2, 1882, Joseph Wharton advertised that the Camden Glass Works was “mfrs. of Green & Colored Glass, Hollow-ware, Genuine Mason Fruit Jars.” The plant was located at 10th & State streets at Camden, but Robert R. Haydock was the “Selling Agent” at 75 Murray St. in New York. The firm advertised “a new patented fruit jar entitled ‘The Advance’” on May 24, 1883 (quoted in Roller 1997). Thomas G. Otterson of Philadelphia was the inventor of the jar closure, although he did not receive his patent until September 18, 1883 – four months after Camden Glass first advertised the jar. Otterson assigned half the patent rights to Joseph Wharton, the proprietor of the Camden Glass Works (see Patent section below). The firm extensively advertised both the Advance and Mason’s Improved jars throughout 1884.

Another 1883 ad (*American pottery & Glassware Reporter* 1883:23) stated that the Camden Glass Works (under Joseph Wharton) was the “Manufacturer of Fruit Jars, Mason P.L., Mason Improved, Gem” along with amber flasks and wine bottles, and all kinds of green hollow ware from stock or private molds” and illustrated a Mason jar (Figure 2).

Wilson and Caperton (1994:70) recorded all beer bottle advertising in *The Western Brewer* between 1883 and 1890 as well as samples from issues between 1878 and 1882. The Camden Glass Works only advertised beer bottles for a single year between August 1883 and August 1884. An 1884 ad listed “Fruit Jars, Mason P.L., Mason Improved, and the Advance,” and the plant was doing well as of May 15 (Roller 1997). While it is unclear how much the company depended on fruit jars sales, it was the finishing of these fruit jars that led to the closure of the works by the end of the year.

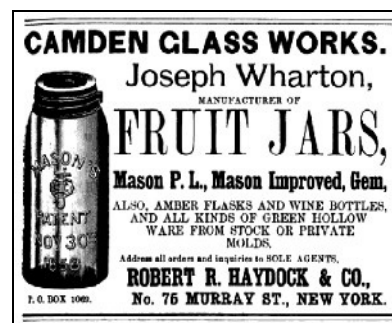


Figure 2 – 1883 ad (*American pottery & Glassware Reporter* 1883:23)

Wharton was embroiled in a suit initiated by the Cohansey Glass Mfg. Co. over the use of a glass-grinding machine based on the Kelly & Samuel patent of 1869 (National Reporter System 1886:189). In mouth-blown jars with screw threads, the threads were formed in the

mold. The jar was then wetted, burst, or broken off from the blowpipe, and the rim of the finish was ground flat. The Kelly & Samuel invention provided a mechanical means to accomplish the grinding (see Patent section).

Thomas Hipwell patented a similar “Glass-Grinding Machine” in 1876 that used a similar grinding surface but had a different method of holding the jars in place and turning them during the grinding operation. The Cohansey lawyers averred that the Camden Glass Works had modified its Kelly & Samuel machines in such a way as to infringe on the Hipwell grinding machine patent. There was no question that the machines had been modified. The question was whether those modifications violated the later patent. The court passed judgement in favor of Cohansey, apparently causing the demise of the Camden Glass Works (National Reporter System 1886:189-192).

The timing requires a bit of speculation. The court passed judgement on May 14, 1886, apparently two years after the closing of the Camden Glass Works. It is possible that the court had instructed Camden Glass to cease use of the machines pending a court ruling. If so, the burden of hand grinding, downtime to remove the machines, fines imposed by the court, or some combination of these may have been sufficient to create the demise of the firm.

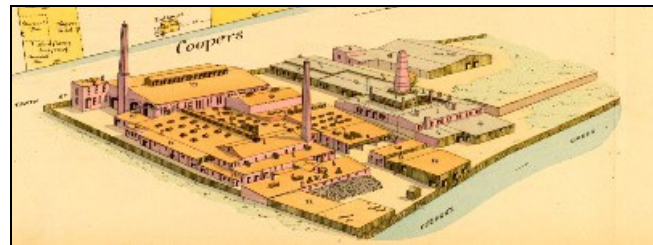


Figure 3 – Hexamer 1891 drawing – glass factory in white (Free Library of Philadelphia Digital Collections)

The March 26, 1885, issue of *Crockery & Glass Journal* noted that the Camden Glass Works had “not been in blast this season” (Roller 1997). Although the firm was listed in the directory as late as 1885, it is virtually certain that the plant closed in late 1884 (Pepper 1971:170; Prowell 1886:530). The January 17, 1890 Hexamer General Surveys map (Volume 24) still showed the glass works – with the addition of a very large product shed – but the plant was idle (Figure 3).

Patents

The Otterson Patents of 1883, 1884, and 1885

Thomas G. Otterson of Philadelphia applied for a patent for a “Jar-Fastener” on March 31, 1883. He received Patent No. 285,062 on September 18 of the same year (Figure 4). Otterson assigned half of the patent to Joseph Wharton. Wharton advertised the new jar – The Advance – by at least May 24 – less than two months after Otterson applied for the patent. The patent drawing showed a glass lid held in place by a spring-loaded clamp that tightened by engaging a continuous thread (in Otterson’s words, “spirally arranged beads or threads”) molded into the finish of the jar.

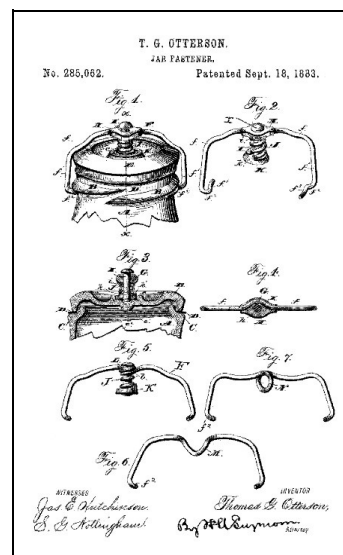


Figure 4 – Otterson’s 1883 patent

Otterson may have foreseen the collapse of the Camden Glass Works. While still at Philadelphia, he collaborated with John H. Otterson (possibly a brother) to produce a “Cap or Cover for Jars or Cans.” The Ottersons applied for a patent on June 12, 1884, and received Patent No. 308,571 on November 25 of that year. Significantly, they did *not* assign the patent to anyone else. Although the Ottersons never referenced the previous invention, and the new lid and jar finish showed distinct changes, it is clear from the patent drawings and the actual jars that the 1884 patent was inspired by and improved on the 1883 patent (see the Woodbury section for more information about the later patents and jars).

Otterson apparently withdrew from the firm about the time of the collapse and moved to Woodbury, New Jersey. There, he conspired with Cornelius C. Voorhees and applied for a patent for a “Glass Can-Cap” on December 29, 1884. The pair received Patent No. 313,229 on March 3, 1885 – an obvious improvement on the November 25, 1884 patent. This was the prototype for the Woodbury Glass Works jars that bear the “WOODBURY” name¹ and, usually, a WGW monogram that appears to have been inspired by the JW monogram – thus possibly devised by Otterson.

¹ These jars should not be confused with the pressed, milk (opal) glass cold cream jars made for Woodbury Soap Co., maker of Woodbury Cold Cream.

Kelly & Samuel, 1869

The Camden Glass Works apparently used the grinding machine invented by Kelly & Samuel. On December 28, 1869, Alexander W. Kelly and John B. Samuel, both of Philadelphia, received Patent No. 98,270 for an “Improvement in Machine for Grinding Glass Jars” (Figure 5). John was apparently related to A.R. Samuel, the owner of the Keystone Glass Works of Philadelphia – one of the other users of the Kelly & Samuel machine. According to the court records, Wharton had made some modifications to the machine that infringed on the Hipwell patent (see below).

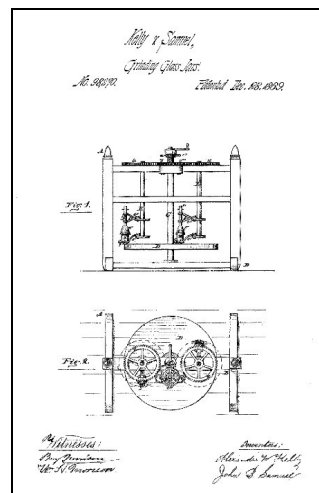


Figure 5 – Kelly & Samuel's 1869 patent

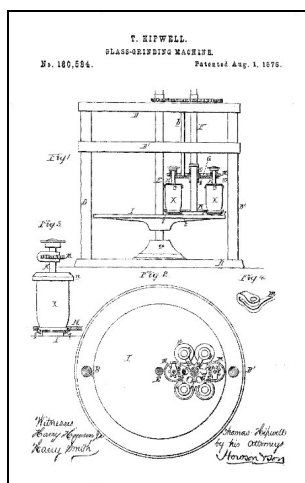


Figure 6 – Hipwell's 1876 patent

Thomas Hipwell, 1876

If Otterson's patent set the Camden Glass Works in motion, another, earlier patent was its undoing. On March 13, 1876, Thomas Hipwell applied for a patent for an “Improvement in Glass Grinding-Machines.” He received Patent No. 180,584 on August 1 of the same year (Figure 6). He assigned the patent to the Cohansey Glass Mfg. Co. Hipwell's invention greatly simplified grinding the rims of fruit jars with continuous-thread finishes.

Alexander W. Kelly, 1882

Although the device apparently played no part in the altercation between the Cohansey Glass Mfg. Co. and the Camden Glass Works, Alexander W. Kelly applied for another “Glass-Grinding Machine” patent on February 25, 1882. He received Patent No. 266,840 on October 31 of the same year (Figure 7). This was apparently an improvement over both the Kelly & Samuel 1869 device and the Hipwell 1876 machine.

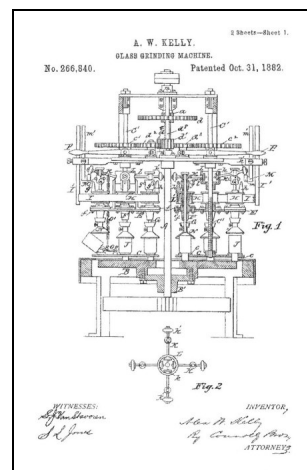


Figure 7 – Kelly's 1882 patent

Containers and Marks

It is likely that the Camden Glass Works used no mark during its earliest years – except for its full name on some soda bottles. There is a remote chance that Camden Glass used the C.G.W. logo that has been found on Union (strap-sided) flasks, Hutchinson soda bottles, beer bottles, and Turlington Balsam bottles.² However, it is *much* more likely that the Clyde Glass Works made most or all of those (see the section on Clyde Glass Works for a complete discussion).

ADVANCE (1883-1884)

Toulouse (1969:14-15) illustrated and described the earliest variation of the Advance jars. The front of the jar was embossed “TRADE MARK (arch) / ADVANCE through a JW monogram (horizontal) / PAT. APL'D FOR (inverted arch)” on the front body (Figures 8-10). Each jar was mouth blown with a ground rim. Toulouse did not know the maker.

Roller (1983:354) added a second variation. This jar was identical, except that the last line was now “PAT SEPT 18, 1883.” He dated the jars ca. 1883-1886 and noted the Camden Glass Works as the manufacturer. Creswick (1987:3) added that the pint sizes in both variations were made with two “different outside mouth measurements . . . 2 1/8” (Midget), and 2 1/2” (Regular mouth). The patent document illustrated four different clamp styles that could be used with the lids. One had a simple coil in the center of the wire, and this was apparently the one selected by Camden Glass for its jars (Figure 11). Another had a bend in the wire that affected the pressure, and the final two were more complex, each with a coiled spring affixed

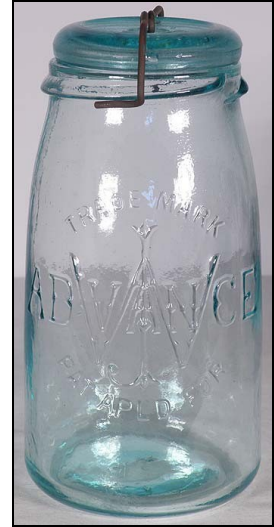


Figure 8 – Advance Jar
(North American Glass)



Figure 9 – Lid of Advance Jar
(North American Glass)



Figure 10 – Finish of Advance Jar
(North American Glass)

² Turlington bottles were some of the earliest embossed medicine bottles, first used in 1774. Their use continued for centuries. See Rawlinson (1969) for more information.

to the wire clamp. Creswick noted that some of the lids had centers that were “too depressed for the clamp with the coil.” She hypothesized that one of the other clamps was used for these.

Leybourne (2008:4) added the missing link – a jar with “PAT SEPT 18, 1883” embossed over a ghosted “PAT. APL'D FOR.” This was

only found on the quart size. Creswick (1987:3) also suggested that the jars were made by the Woodbury Glass Works, but there is no indication that her identification was correct. She almost certainly swayed by the connections of both glass houses to Thomas Otterson.



Figure 11 – Variations in Advance Jars (Creswick 1987:3)

Roller (1883:354) listed two variations of lids, both embossed on the top:

1. * ADVANCE FRUIT JAR * PATENT SEP 18, 1883
2. TRADE ADVANCE (through JW monogram) MARK

Creswick (1987:3) added a lid that had the depression in the center but no embossing and disagreed slightly as to the placement of the embossing on one lid. Since Roller (2011) agreed with the earlier Roller study, we have maintained that description above.

Each of these variations had a very short manufacturing history. The one embossed “PAT. APL'D FOR” was probably only made during 1883. Once the patent was received, the bottom line was peened out and replaced with “PAT SEPT 18, 1883.” Both the ghosted variation and the dated jar were almost certainly made during late 1883 and all of 1884.

CAMDEN GLASS WORKS (ca. 1854-1859)

“CAMDEN GLASS WORKS” was embossed in an arch on the sides at least four blob-top soda bottles, all used in the New Jersey/eastern Pennsylvania area (Figure 12). The name of the bottler was embossed on the opposite side on three of these bottles. All had pontil scars on the bases (von Mechow 2024). Our only



Figure 12 – CAMDEN GLASS WORKS (von Mechow 2014)

eBay example had an applied finish, “CAMDEN GLASS WORKS” embossed in an arch on one side, and “MINERAL / WATER” embossed in a rectangular plate on the other (Figure 13).

Aside from the somewhat generic “Mineral Water” bottle we found on eBay, von Mechow (2024) listed and discussed three others, embossed respectively “A.A. Buchanan / N.B.,” “J. MCLAUGHLIN / PHILA,” and “J.T. NISBAUM / AND BROTHERS” all in plates (probably square) on the non Camden Glass Works side. Although von Mechow suggested that the bottle was made ca. 1852-1853, he dated McLaughlin 1853-1859.

Since von Mechow lives in a suburb of Philadelphia, he had access to the full set of city directories – almost certainly the source of his information on McLaughlin.

Our online searches turned up a John McLaughlin in the 1855 Philadelphia directory listed as “tavern & bottler, 375 n 3rd” – suggesting that McLaughlin operated both a tavern and bottling works (the works likely servicing the tavern) during that year. This supports von Mechow’s 1853-1859 dates for the firm. In addition, we found Ann McLaughlin listed as a “mineral water manufacturer, 1330 n 4th” in the 1865 directory. Ann was John’s wife – and she likely took over the business upon John’s death or disability, operating from ca. 1860 to some point after 1865. One of Ann’s bottles was very similar in shape to our only example of a Camden Glass Works bottle (Figures 14 & 15).



Figure 15 – Pontiled base (eBay)



Figure 13 – CAMDEN GLASS WORKS (eBay)



Figure 14 – Ann McLaughlin Mineral Water Bottle (eBay)

To make this even more credible, 375 N. 3rd St., Philadelphia, is directly across the Delaware River from Camden –

just four blocks from the street that became Kaighn Ave. on the Camden side of the bridge. A series of firms operated a flint glass house (i.e., tableware) on Kaighn Ave. from 1855 to 1859 – a perfect venue and date range to have deviated from tableware manufacture into the mineral water bottle business, almost certainly only briefly.

Camden Glass Works (1851)

According to the *Philadelphia Public Ledger* for July 22, 1851, the Camden Glass Works, “recently built at Cooper’s Point, by the Mssrs. Coleman, Keenan & Company,” employed 60 workers producing “all kinds of plain and fancy glass The establishment is quite extensive.” However, the *ledger* added on October 30, 1851, that the glass house had closed and had been sold at public auction that day.

Several parts of this brief description are interesting and possibly relevant to the bottle discussion. First, the later Camden Glass Works was located between 10th St. and Cooper’s Creek. Cooper’s Point was formed by the entrance of Coopers Creek into the Delaware River; therefore, this rather vague direction could certainly fit the location of Wharton’s Camden Glass Works.

Second, the term “all kinds of plain and fancy glass” certainly referred to tableware, but the first term “plain” could also fit bottles. The article also stated that the “establishment is quite extensive” – suggesting that the factory was large. The Hexamer survey drawing also showed a large operation.

Finally, the Hexamer survey said that the Camden Glass Works was “*rebuilt*” (our emphasis) in 1876 – possibly rebuilt from the Coleman, Keenan & Co operation? All of this suggests at least a possibility that there was yet another Camden Glass Works, open during the 1854-1860 period – making at least a few bottles.

Excelsior Flint Glass Works (1841-1867)

John Capewell, James G. Capewell, and John Bamford operated the earlier Capewell & Bamford Glass Works, a flint glass plant, between 1841 and 1854 on Kaighn Ave. The

Capewells operated the factory (known as the Excelsior Flint Glass Works by 1857) until 1859, then five glass firms – Union Glass Mfg. Co., Cochran & Co., Bowman & Chisholm, Thomas Burns, and the United States Glass Works – attempted to manage the glass house, then known as the Kaighn’s Point Glass Works, until 1864. The final group – Duffield & Co. (Thomas J. Duffield, Calvin H. Test, and John B. Powell) ran the works from 1864 to 1867, when they, too, failed. In 1875, the idle factory was dismantled and turned into a housing tract (Roller 1997). Probably, one of these firms named the factory the Camden Glass Works and made the soda bottles embossed with the Camden Glass Works name.

Later Glass Plants

Four later glass factories were also called the Camden Glass Works (sometimes informally), but they had a different operating company name. In addition, there was an earlier tableware plant described above. We present the other histories in cameo formats.

Crystal Glass Mfg. Co., Camden, New Jersey (1886-1888)

On April 30, 1886, the Crystal Glass Mfg. Co. incorporated with J.R. Range as president, P. Strang as treasurer, and A.C. Lamar as secretary. Beginning with a capital of \$10,000, the plant was located on Front Street between Atlantic Ave. and Howell Ave., a couple of miles southwest of the old Camden Glass Works of Joseph Wharton on Cooper’s Creek. Although the works made “wine, beer, Weiss beer, porter and mineral water bottles, pickle jars and various kinds of green and amber bottles; also flasks and demijohns” as well as “private molds for the trade in the New England and adjacent states,” Crystal sold to the Whitney Brothers in 1888 (Pepper 1971:37; Prowell 1886:530).

Apparently, the firm was successful up to the point of the sale. According to the *Camden Courier-Post* for April 16, 1887:

The Sparks Medicine Company yesterday gave an order to the Camden Glass Works for nine thousand gross of bottles. William H. Sparks, the president of the company, has gone to St. Louis for the purpose of arranging for the delivery of Kidney and Liver Cure already sold. This sale will amount to about \$18,000.

Camden Glass Mfg. Co., Camden, New Jersey (1888-ca. 1894)

As noted above, the Whitney Brothers purchased the Crystal Glass Mfg. Co. in 1888. Although a fire destroyed the factory the following year, the Whitneys apparently rebuilt the plant, producing green bottles and fruit jars at a single continuous tank with 14 rings (Pepper 1971:170; Roller 1997).

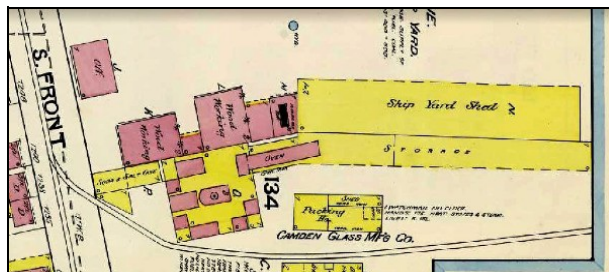


Figure 16 – Camden Glass Mfg. Co. (Sanborn map, 1891)

According to the *Camden Courier-Post* for January 22, 1890, the Camden Glass Mfg. Co. had incorporated the previous day with a capital of \$100,000, only \$1,000 of which was subscribed. John C. Martin, George R. Robertson, and John W. Sinnickson were the incorporators with the intention to “manufacture buy and sell glass and glassware.” The 1891 Sanborn map showed the glass house on Front St., sandwiched between John H. Dialogue Iron Works (Atlantic Ave.) and C.B. Cole’s Saw & Planing Mill (Howell Ave.) (Figure 16).

The *Camden Courier-Post* reported a major strike at the plant on March 8, 1894, noting that the factory had “suspended since last June” but “would resume this morning” if the blowers would “submit to a reduction of forty percent on the dollar.” Although 15 “scabs” [i.e., non-union workers] continued to operate the plant, the union blowers refuse to take the reduction. Since the 1894 newspaper report was the last information we could find about the operation, it likely closed soon after.

According to the September 1, 1897, issue of *China, Glass & Lamps*, the “Glass factory on Atlantic Ave.” [i.e., the former Camden Glass Mfg. Co.] had been “recently owned by F.F. Michellon.” About that time, Constantine Wagner bought the plant and was in the process of making “extensive repairs.” When the factory reopened, it would produce thermometers and gauges for testing liquors. This makes it clear that Michellon acquired the works from the Whitneys at some point after 1894. We found no other information on Wagner’s operation of the business.

Capital Glass Co., Camden, New Jersey (ca. 1902-1904).

In 1902 the *Commoner & Glassworker* glass factory directory listed the Capital Glass Co. as making beer and mineral water bottles at one furnace with six pots. However, the 1904 directory noted that the firm was “in hands of H.L. Bartlett, receiver” (Roller 1997)

Camden Glass Works, Camden, New Jersey (ca. 1923-ca. 1925 or later)

Although not fully relevant for this study, a 1925 radio tube ad was too good to pass up. A new Camden Glass Works advertised in the *Courier-Post* on May 7, 1923 that it needed an “intelligent boy 16 years old to learn making radio bulbs.” This Camden Glass Works was at 103 Arch St. An ad from the February 8, 1925, *Philadelphia Inquirer* illustrated one of the radio tubes (Figure 17).



Figure 17 – Radio Tube ad (*Philadelphia Inquirer* 2/8/1925)

Discussion and Conclusions

Both the Advance jar and the full glass house name are clear indicators of Camden Glass Works products. Because the plant was short lived after the invention of the jars, the “ADVANCE” embossing forms an almost perfect chronological marker for dating sites. The pontil scars on the bottles embossed with the full factory name, however, do not fit well with the generally accepted dates for the discontinuance of the use of pontil rods – typically not used after the 1860s, almost completely phased out by the early 1870s (Lindsey 2014).

The wording on the report with the 1890 Hexamer General Survey Map *may* be significant. The report said that the glass works had been rebuilt in 1876. If the factory was originally constructed in 1875, this seems very soon for a rebuilding. It is thus likely that either the wording is incorrect or that the original plant was built earlier. We have only one source (a secondary source at that) giving the opening date of 1875.

Clearly, the pontiled soda bottles embossed “CAMDEN GLASS WORKS” were not made by the Camden Glass Works that were open between 1875 and 1884 under Joseph Wharton. Since one of the bottlers using a Camden bottle was open during the 1854-1859 period, it seems likely that one of the operating firms that ran the tableware (flint) glass house during the same period renamed the plant the Camden Glass Works and made the bottles. Alternatively, the bottles (only four that we have found) were produced by a short-lived Camden Glass Works we have not yet discovered.

Acknowledgments

As always, we wish to thank Doug Leybourne for allowing us to use the drawings from the Alice Creswick books and Greg Spurgeon for granting permission to use the photos from North American Glass.

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